Office-Supreme Court, U.S.
FILED
MAR 14 1983
ALEXANDER L. STEVAS,
CLERK

Nos. 82-524, 82-545 and 82-551

IN THE

SUPREME COURT OF THE UNITED STATES

October Term, 1982

BALTIMORE GAS AND ELECTRIC COMPANY, ET AL.,
Petitioners,

v.

NATURAL RESOURCES DEFENSE COUNCIL, INC.,
Respondent.

UNITED STATES NUCLEAR REGULATORY COMMISSION and UNITED STATES OF AMERICA,
Petitioners,

v.

NATURAL RESOURCES DEFENSE COUNCIL, INC., ET AL.,
Respondents.

COMMONWEALTH EDISON COMPANY, ET AL.,
Petitioners,

v.

NATURAL RESOURCES DEFENSE COUNCIL, INC., ET AL.,
Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF OF *AMICI CURIAE* STATES OF WISCONSIN, KANSAS, LOUISIANA, CONNECTICUT, VERMONT, MISSOURI, TENNESSEE, SOUTH DAKOTA, NEW MEXICO, HAWAII, WEST VIRGINIA, WYOMING, TEXAS AND CALIFORNIA AND THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA IN SUPPORT OF RESPONDENT

BRONSON C. LA FOLLETTE*
Attorney General

CARL A. SINDERBRAND
Assistant Attorney General

STATE OF WISCONSIN
Post Office Box 7857
Madison, Wisconsin 53707
(608) 266-3836

*Counsel of Record

March 11, 1983

ROBERT T. STEPHAN
Attorney General
ROBERT VINSON EYE
Assistant Attorney General
STATE OF KANSAS
2nd floor, Kansas Judicial Center
Topeka, Kansas 66612
(913) 296-2215

WILLIAM J. GUSTE, JR.
Attorney General
STATE OF LOUISIANA
Post Office Box 44005
Baton Rouge, Louisiana 70804
(504) 342-7013

JOSEPH I. LIEBERMAN
Attorney General
STATE OF CONNECTICUT
30 Trinity Street
Hartford, Connecticut 06106
(203) 566-2027

JOHN J. EASTON, JR.
Attorney General
MERIDETH WRIGHT
Assistant Attorney General
STATE OF VERMONT
Office of Attorney General
109 State Street
Montpelier, Vermont 05602
(802) 828-3171

JOHN ASHCROFT
Attorney General
ROBERT LINDHOLM
Assistant Attorney General
STATE OF MISSOURI
Post Office Box 899
Jefferson City, Missouri 65102
(314) 751-3321

WILLIAM M. LEECH, JR.
Attorney General
STATE OF TENNESSEE
450 James Robertson Parkway
Nashville, Tennessee 37219
(615)741-3491

MARK V. MEIERHENRY
Attorney General
STATE OF SOUTH DAKOTA
Attorney General's Office
Capitol Building
Pierre, South Dakota 57501
(605) 773-3215

PAUL G. BARDACKE
Attorney General
STATE OF NEW MEXICO
Post Office Drawer 1508
Santa Fe, NewMexico 87504-1508
(505) 827-6000

TANY S. HONG
Attorney General
STATE OF HAWAII
State Capitol
Honolulu, Hawaii 96813
(808) 548-4740

CHAUNCEY H. BROWNING, JR.
Attorney General
LEONARD KNEE
Deputy Attorney General
STATE OF WEST VIRGINIA
Environmental Task Force
Building 3, Room 630
Capitol Complex
Charleston, West Virginia 25305
(304) 348-9160

A.G. McCLINTOCK
Attorney General
STATE OF WYOMING
123 Capitol Building
Cheyenne, Wyoming 82002
(307) 777-7841

JIM MATTOX
Attorney General of Texas
DAVID RICHARDS
Executive Assistant Attorney General
STATE OF TEXAS
P.O. Box 12548
Capitol Station
Austin, Texas 78711
(512) 475-6139

JANICE E. KERR
J. CALVIN SIMPSON
GRETCHEN DUMAS
Attorneys for
PEOPLE OF THE STATE OF CALIFORNIA
and PUBLIC UTILITIES COMMISSION OF
THE STATE OF CALIFORNIA
350 McAllister Avenue
San Francisco, California 94102
(415) 557-0470

ISSUES PRESENTED

1. Whether the National Environmental Policy Act (NEPA), 42 U.S.C. sec. 4332, requires the Nuclear Regulatory Commission (NRC) to consider the health, environmental and socioeconomic impacts of nuclear waste in nuclear power plant construction permit and operating license proceedings.

2. Whether the NRC may, based on the record before it, assume that there are no health, environmental and socioeconomic risks and uncertainties associated with the reprocessing, storage and disposal of nuclear waste, thereby precluding any consideration of these risks and uncertainties in any construction permit or operating license proceeding.

TABLE OF CONTENTS

Page

STATEMENT OF INTEREST OF *AMICI* 2

SUMMARY OF ARGUMENT 3

ARGUMENT 4

I. NEPA Requires The NRC To Consider The Costs, Uncertainties And Risks Associated With The Uranium Fuel Cycle In Individual Nuclear Plant Licensing Proceedings 4

II. Table S-3 Prevents The Consideration Of Any Costs, Uncertainties Or Risks Associated With The Storage, Reprocessing Or Disposal Of Nuclear Waste In Nuclear Power Plant Licensing Proceedings. 8

A. The purpose of Table S-3. 8

B. The zero-release assumption 10

III. The Court Of Appeals' Decision Lies Within The Scope Of This Court's Remand 15

CONCLUSION 20

TABLE OF CASES

Andrus v. Sierra Club,
442 U.S. 347 (1979) 5

Calvert Cliffs Coord. Comm. v. United States Atomic Energy Com'n,
449 F.2d 1109
(D.C. Cir. 1971) 6,7

Greene County Planning Board v. Federal Power Com'n, 455 F.2d 412 (2nd Cir. 1972), *cert. den.* 409 U.S. 849 (1972) 7

Matter of Public Service Electric & Gas Co., et al., 6 NRC 206 (1977) 6,13

Minnesota v. NRC, 602 F.2d 412 (D.C. Cir. 1979) 12

North Slope Burough v. Andrus, 486 F. Supp. 332 (D. D.C. 1980) *aff'd* in part, *rev'd.* in part, 642 F.2d 589 (D.C. Cir. 1980) 15

NRDC v. NRC, 685 F.2d 459 (D.C. Cir. 1982) ..... *passim*

Sierra Club v. Froehlke, 359 F. Supp. 1289 (D.C. Tex. 1973) 12

Sierra Club v. Morton, 510 F.2d 813 (5th Cir. 1975) 6

Silva v. Lynn, 482 F.2d 1282 (1st Cir. 1973) 7,12

Strycker's Bay Neighborhood Council v. Karlan, 444 U.S. 223 (1979) 5

Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519 (1978) *(Vermont Yankee II)* ..... *passim*

Weinberger v. Catholic Action of Hawaii, 454 U.S. 139 (1981) 5

STATUTE *Page*

42 U.S.C. sec. 4332(2)(c) 5

REGULATIONS

10 C.F.R. sec. 51.20(e) 8
10 C.F.R. sec. 51.23(c) 9
40 C.F.R. sec. 191.13 12
40 C.F.R. sec. 1502-22(b) 15

FEDERAL REGISTER

44 Fed. Reg. 45363 9
44 Fed. Reg. 45368 14,15
44 Fed. Reg. 45369 11
44 Fed. Reg. 45371 9
44 Fed. Reg. 61372 12
44 Fed. Reg. 61373 13
47 Fed. Reg. 58296 12

OTHER AUTHORITIES CITED

Functional Requirements and Performance Criteria for Waste Packages for Solidified High-Level Waste and Spent Fuel (DOE/NWTS-33(4a) (July 1982) 11

NUREG — 0116 (October, 1976) 13,14

Report of Ad Hoc Panel of Earth Scientists: The State of Geological Knowledge Regarding Potential Transport of High-Level Radioactive Waste from Deep Continental Repositories, EPA/520/4-78-044 (June, 1978) 12

Page

Interagency Review Group
Report to the President by the Interagency Review Group on Nuclear Waste Management, (March 1979) 13

Repository Performance and Development Criteria (DOE/NWTS-33(3)) (July 1982) 11

U.S. Nuclear Regulatory Comm'n., Report of the Working Group on the Proposed Rulemaking on the Storage and Disposal of Nuclear Wastes (January 29, 1981) 13

United States Geological Survey, Geologic Disposal of High-Level Radioactive Wastes-Earth Science Perspectives, USGS Perspectives, USGS Circular 779 (1978) 12

Nos. 82-524, 82-545 and 82-551

IN THE

SUPREME COURT OF THE UNITED STATES

October Term, 1982

BALTIMORE GAS AND ELECTRIC COMPANY, ET AL.,
Petitioners,

v.

NATURAL RESOURCES DEFENSE COUNCIL, INC.,
Respondent.

UNITED STATES NUCLEAR REGULATORY COMMISSION and UNITED STATES OF AMERICA,
Petitioners,

v.

NATURAL RESOURCES DEFENSE COUNCIL, INC., ET AL.,
Respondents.

COMMONWEALTH EDISON COMPANY, ET AL.,
Petitioners,

v.

NATURAL RESOURCES DEFENSE COUNCIL, INC., ET AL.,
Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

BRIEF OF *AMICI CURIAE* STATES OF WISCONSIN, KANSAS, LOUISIANA, CONNECTICUT, VERMONT, MISSOURI, TENNESSEE, SOUTH DAKOTA, NEW MEXICO, HAWAII, WEST VIRGINIA, WYOMING, TEXAS AND CALIFORNIA AND THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA IN SUPPORT OF RESPONDENT

STATEMENT OF INTEREST OF *AMICI*

Amici herein are sovereign states of the United States, constitutionally charged with the responsibility to protect the public health, safety and general welfare of state citizens. Pursuant to this responsibility, the states have taken an active interest in the development of nuclear energy, both in the general regulation of energy production and protection of the environment and public resources. Additionally, each of the states represented herein now has or may soon have nuclear generating facilities within its borders.

Perhaps the most important federal mechanism available to the states and the public to protect their interests in safe, reliable, economical and environmentally sound energy production is the environmental assessment process required under NEPA. It is only through this process that all such issues may be fully aired in a public forum, and it is only this process that ensures that such issues will be considered in the decision-making process.

The petitioners in this action seek to restrict the extent to which these issues, as they relate to the disposal of nuclear wastes generated by proposed facilities, will be considered. The NRC has, through generic rulemaking, attempted to establish and define the generic costs, both environmental and socioeconomic, associated with the use of nuclear fuel, so that these costs need not be redeveloped in each licensing proceeding. *Amici* do not take issue, in this action, with the authority of the NRC to utilize such a procedure. The NRC, however, has gone one step further, to determine that there are no costs associated with nuclear waste, generic or unique, which must or even can be considered in individual licensing proceedings. The licensing boards and public are thereby precluded from including issues relating to

nuclear waste management in the cost-effectiveness calculus required under NEPA.

Adoption of petitioners' arguments in this case will seriously jeopardize the integrity of NEPA. The public will have been deprived of the ability to know the costs and uncertainties associated with a proposed facility, and to compare alternative sources of energy. States will be unable to effectively plan for long-term energy needs, and to ensure safe, reliable and available energy.

SUMMARY OF ARGUMENT

The development of methods to safely dispose of nuclear wastes is one of the most profound crises facing this country and the world. While nuclear generating facilities continue to be constructed and licensed and spent fuel rods continue to accumulate, little progress has been made toward developing safe methods of disposal. The wastes generated by these facilities pose enormous risks to the health and safety of all life. The radiation-related hazards created today will continue for literally tens and perhaps hundreds of thousands of years. The morass of technological, economic and institutional issues yet to be addressed is evidenced by a variety of federal cases touching these issues, the NRC's own efforts in the Waste Confidence Rulemaking and the uncertainties expressed by other federal agencies.

In this context, the NRC has developed a generic rule evaluating and defining by numerical values the environmental health and safety risks associated with the uranium fuel cycle. The purpose of this rule is to limit the extent to which the NRC must reevaluate these risks in each permit or license proceeding. Despite the admitted uncertainties associated with the decommissioning of power plants and reprocessing and disposal of nuclear wastes, the Commission has

concluded that the numerical value for this "back end" of the fuel cycle should be zero; *i.e.*, that there is no risk to the environment associated with the disposal of nuclear waste.

In *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519 (1978) *(Vermont Yankee II)*, this court remanded the Table S-3 rule to the court of appeals to determine whether it was justified by the administrative proceedings in which it was developed. The court of appeals engaged in this review and concluded that the numerical values in the final rule associated with the back end of the fuel cycle are both arbitrary and capricious and represent a clear error in judgment. *NRDC v. NRC*, 685 F.2d 459 (D.C. Cir. 1982) (Pet. App. la-69a).

The decision of the court of appeals is both sound in its reasoning and within the scope of the supreme court's remand. Contrary to petitioners' accusations, the court did not stray from its scope of review under NEPA or the Administrative Procedure Act (APA). Nor did it criticize the NRC's determination to engage in generic rulemaking. Rather, it concluded that the resulting rule is not supported by the evidence developed in the proceeding, and that it wrongfully prevents the results of that proceeding from being reflected and considered in individual licensing proceedings.

The states represented as *amici* herein respectfully urge the court to affirm the decision of the court of appeals.

ARGUMENT

I. NEPA Requires The NRC To Consider The Costs, Uncertainties And Risks Associated With

The Uranium Fuel Cycle In Individual Nuclear Plant Licensing Proceedings.

In *Vermont Yankee II,* this court stated, *inter alia,* that the procedural mandate of NEPA is "to insure a fully informed and well-considered decision." *Id.,* 435 U.S. at 558. *See also, Strycker's Bay Neighborhood Council v. Karlan,* 444 U.S. 223, 227 (1979). It is the position of *amici* herein that the decision to license a nuclear generating plant can be neither fully informed nor well-considered if environmental costs of the uranium fuel cycle are excluded from the licensing board's deliberations.[1] The construction of NEPA, as enunciated in *Vermont Yankee II, supra,* was followed by the court below in this case. Judge Bazelon's opinion below found, *inter alia,* that each new nuclear power plant represents an action that must be the subject of an Environmental Impact Statement (EIS) pursuant to the requirements of NEPA. *NRDC v. NRC, supra,* 685 F.2d at 475-76 (Pet. App. 29a-30a). Further, Judge Bazelon determined that individual licensing authorities, in order to make "fully informed and well-considered" decisions must be free to consider significant environmental risks and costs related to the uranium fuel cycle. *Id.,* 685 F.2d at 484-85, n. 134 (Pet. App. 48a-49a).

Moreover, Judge Bazelon's opinion is consistent with this court's construction of section 102(2) (c) of NEPA, 42 U.S.C. sec. 4332(2) (c), as announced in *Weinberger v. Catholic Action of Hawaii,* 454 U.S. 139 (1981), wherein the court quotes *Andrus v. Sierra Club,* 442 U.S. 347, 350 (1979), for the proposition that "[t]he thrust of §102(2) (c) is ... that environmental concerns be integrated into the very process of agency decisionmaking. The 'detailed statement' it requires is the

[1]As used herein, the terms "license" and "licensing" shall refer to both construction permits and operating licenses.

outward sign that environmental values have been considered during the planning stage of agency actions."

The function of judicial review under NEPA is to insure that decision-makers have disclosed and analyzed all significant issues that relate to environmental costs and to determine whether an overall balancing of environmental and nonenvironmental factors has taken place at each stage of the decision making process. *Calvert Cliffs Coord. Comm. v. United States Atomic Energy Com'n.*, 449 F.2d 1109, 1118 (D.C. Cir. 1971); *Sierra Club v. Morton*, 510 F.2d 813, 819-20 (5th Cir. 1975).[2]

The original, interim, and final fuel cycle rules herein all preclude individual licensing boards from considering at least two major uncertainties underlying the Table S-3 rule. *NRDC v. NRC, supra*, 685 F.2d at 482 (Pet. App. 43a-44a). First, the "uncertainty concerning the integrity of the permanent respository, if such a repository is ever built," and second, the "uncertainty over whether and when such a repository, or equivalent system of disposal, will be developed." *Id.*, 685 F.2d at 483 (Pet. App. 45a).[3] The NRC's generic Table S-3 rule, which embodiesthe zero-release assumption (*see* p. 10, *infra*), forecloses consideration of these uncertainties and thereby directly violates the man-

[2]This is particularly crucial in licensing decisions where there may be only a slight differential between costs incurred and benefits realized from the operation of a particular plant. 685 F.2d at 477, n. 93. *See also, Matter of Public Service Electric & Gas Co., et al.*, 6 NRC 208, 209 (1977).

[3]These two uncertainties may have significant implications for individual plant cost/benefit considerations. For example, the uncertainty over whether a repository will be built may require that plants be equipped and prepared to store wastes for extended periods of time. The amount of waste and the length of time required wastes are likely to be on a plant site clearly represent environmental costs and could impinge on licensing decisions.

date of NEPA, which requires consideration of environmental costs "'at every distinct and comprehensive stage ...'" where a balancing of environmental or nonenvironmental factors is appropriate and where environmental costs may be minimized through alterations in the proposed action. *Greene County Planning Board v. Federal Power Com'n.*, 455 F.2d 412, 420 (2nd Cir. 1972), *cert. den.* 409 U.S. 849 (1972); *Calvert Cliffs, supra,* 449 F.2d at 1118. Judge Bazelon correctly characterized the uncertainties as potential environmental costs that must be disclosed and injected into the decision-making process pursuant to NEPA. *NRDC v. NRC, supra,* 685 F.2d at 478-79 (Pet. App. 36a-38a).[4]

In order for the goals of NEPA to be realized, licensing boards must be able to make independent judgments regarding whether benefits realized from any single project outweigh costs incurred in same. Any other construction of the substantive requirement of NEPA results in effectively allowing the Commission to "sweep [environmental risks and costs associated with any single project] under the rug and pretend [such] will not occur." *Silva v. Lynn,* 482 F.2d 1282, 1285 (1st Cir. 1973). *Amici* herein submit that the irretrievable commitment of resources involved with any single nuclear generating plant is so significant that the decision to license should be made on the cost/benefit data that are pertinent to the particular plant under consideration.

It is crucial to note that the majority opinion below does not find the Commission may never promulgate generic rules to assess environmental costs and

[4]The opinion emphasizes that disclosure of environmental costs alone is insufficient to satisfy the requirements of NEPA. Unless the disclosed environmental costs are injected into the decision-making process, the significance of the disclosures is diminished. 685 F.2d at 483 (Pet. App. 46a).

uncertainties. *NRDC v. NRC, supra,* 685 F.2d at 484 (Pet. App. 47a-48a). However, due to the requirements of NEPA, the promulgation of generic rules which serve to standardize quantifications related to such environmental costs and uncertainties may not also foreclose consideration of such costs and uncertainties underlying the generic rules by individual licensing authorities. *Id.* The petitioners fail to cite any authority for the proposition that promulgation of a generic rule, *a priori,* should end the required balancing of the costs and uncertainties against the expected benefits derived from any individual project. The petitioners would have this court hold that all possible discussion by licensing authorities of the implications arising from such generic rule is no longer relevant in the balancing process required by NEPA. Such a holding would seriously erode the mandate of NEPA which requires consideration and balancing of environmental and nonenvironmental factors at such decision-making stage.

II. Table S-3 Prevents The Consideration Of Any Costs, Uncertainties Or Risks Associated With The Storage, Reprocessing Or Disposal Of Nuclear Waste In Nuclear Power Plant Licensing Proceedings.

A. The purpose of Table S-3.

The rule which lies at the heart of this action, known as "Table S-3," is codified at 10 C.F.R. sec. 51.20(e) (Pet. App. 378a). By this rule, the NRC has sought to establish, by numerical values, the maximum environmental effects of uranium fuel cycle activities per year of operation of a light-water-cooled nuclear reactor.[5]

---

[5]10 C.F.R. sec. 51.20(e) provides that Table S-3 shall serve "as the basis for evaluating the contribution of the environmental effects

In developing the Table S-3 rule, the NRC recognized its duties under NEPA to examine the environmental impacts of a proposed plant and to include a cost-benefit analysis of environmental, economic and other effects. 44 Fed. Reg. 45363 (Pet. App. 344a-345a). It also recognized that the environmental impacts of a nuclear power plant are "not limited to effects specific to the plant itself, ... [but] will also be affected by the fuel cycle activities necessary to support plant operation. ..." *Id.* (Pet. App. 345a.) In an effort to avoid having to reexamine the impacts of the entire spectrum of fuel cycle activities in each licensing proceeding, the Commission chose to develop a generic rule to identify these effects and impacts. The values identified in the rule would then be integrated into the cost-benefit analysis in power plant licensing, thereby avoiding relitigation of these specific issues in individual proceedings. *Id.;* 10 C.F.R. sec. 51.23(c) (Pet. App. 378a-379a).

The final rule, unlike the original and interim rules, is not intended to be so comprehensive as to preclude consideration of all impacts. In adopting the rule, the NRC specifically contemplated that individual licensing proceedings would consider health, socioeconomic and certain other fuel cycle impacts not reflected in the table. 44 Fed. Reg. 45371 (Pet. App. 376a). However, 10 C.F.R. sec. 51.23(c) makes it clear that with limited exceptions,[6] no further elaboration on those factors identified in the table is permitted.

---

of uranium mining and milling, the production of uranium hexaflouride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials and management of low level wastes and high level wastes related to uranium fuel cycle activities to the environmental costs of licensing the nuclear power plant. ..."

[6]Table S-3 does not purport to include all effects of fuel cycle activities identified therein. Specifically excluded are health effects from identified effluents and estimated releases of Radon-222 and Technetium-99. These limited issues are expressly authorized to be considered in individual licensing proceedings.

B. The zero-release assumption.

The court of appeals did not take issue with the authority of the NRC to address the issues relating to fuel cycle activities through generic rulemaking; nor do *amici* herein. What is of concern is that, in developing the entries for the effects of the back end of the fuel cycle, the NRC assumed no effect. Hence, the licensing board, in an individual proceeding, has neither a value to be included in its cost-benefit analysis nor the authority to consider any such evidence which may be proferred at hearing. Thus, while the Commission has recognized its duty under NEPA to include these factors in its analysis and, though the generic rule has provided for such consideration with respect to some aspects of the fuel cycle activities, it has effectively shut the door on consideration of issues relating to nuclear waste.

This "zero-release" assumption, that there are no post-closure costs, risks or uncertainties associated with the disposal of nuclear waste, is entirely unsupportable. In *Vermont Yankee II,* this court recognized the significance of these risks, stating at 435 U.S. at 538-39:

> Vermont Yankee will produce annually well over 100 pounds of radioactive wastes, some of which will be highly toxic. The Commission itself, in a pamphlet published by its information office, clearly recognizes that these wastes "pose the most severe potential health hazard.... Many of these substances must be isolated for anywhere from 600 to hundreds of thousands of years. It is hard to argue that these wastes do not constitute "adverse environmental effects which cannot be avoided should the proposal be implemented," or that by operating nuclear power plants we are not making "irreversible and irretrievable commitments of resources." (Citations omitted.)

The NRC also has recognized that uncertainties exist with respect to waste disposal. In the summary information accompanying the final rule, the NRC recognized these uncertainties, but concluded that "it is reasonable to base impacts on the assumption which the Commission believes the probabilities favor, *i.e.*, that bedded-salt repository sites can be found which will provide effective isolation of radioactive waste from the biosphere. ..." 44 Fed. Reg. 45369 (Pet. App. 369a).[7]

This assumption is unsupportable and is even inconsistent with other representations of various federal agencies. To date, not one potential site has been selected by the Department of Energy (DOE), which is responsible for repository development. No technology for radioactive waste disposal or retrieval has been developed and only very preliminary experimentation with potential geological madia has been initiated. Moreover, the documents generated by DOE as part of its National Waste Terminal Storage (NWTS) Program do not even include zero-release as a performance criterion. Rather, they establish a lesser standard of "adequate containment" and no releases of radionuclides in "unacceptable doses."[8] The United States Environmental Protection Agency (EPA), which establishes the standards for repository containment, also contemplates radioactive releases from permanant repositories.[9] Moreover, both the EPA and United

---

[7]In a similar vein, the Commission made an optomistic assumption with respect to reprocessing, based on a hypothetical model facility, even though radioactive effluent releases have been experienced at the only existing reprocessing facility. 44 Fed. Reg. 45369-70 (Pet. App. 370a-371a).

[8]*See e.g.*, "Repository Performance and Development Criteria" (DOE/NWTS-33(3)), at 5 and 13 (July 1982) and "Functional Requirements and Performance Criteria for Waste Packages for Solidified High-Level Waste and Spent Fuel" (DOE/NWTS-33(4a)), at 7 and 12 (July 1982), which specifically contemplate releases of radionuclides.

[9]The EPA proposed environmental standards for disposal, at

significant reservations regarding the NRC's conclusion that there are no significant risks associated with permanent waste disposal.[10] These reports are significant, not only because of the well-documented uncertainties regarding waste disposal contained therein, but also because "where comments from responsible experts or sister agencies disclose new or conflicting data or opinions that cause concern that the agency may not have fully evaluated the project and its alternatives, these comments may not simply be ignored. There must be good faith, reasoned analysis in response." *Silva v. Lynn, supra,* 482 F.2d at 1285. *See also, Sierra Club v. Froehlke,* 359 F. Supp. 1289 (D.C. Tex. 1973).

The NRC's own activities also belie its assumptions. The Commission has blithely assumed that repositories will be found which will ensure radiation-free disposal. At the same time, however, it is engaged in a separate rulemaking proceeding to determine whether there is even a reasonable probability that such a site can be found.[11] Additionally, the record below indicates the NRC's own staff recognizes that

40 C.F.R. sec. 191.13, establish release limits for both "reasonably foreseeable" and "very unlikely" releases. 47 Fed. Reg. 58296 (December 29, 1982).

[10]*See* United State Geological Survey, Geologic Disposal of High-Level Radioactive Wastes-Earth Science Perspectives, USGS Perspectives, USGS Circular 779 (1978); Report of Ad Hoc Panel of Earth Scientists: The State of Geological Knowledge Regarding Potential Transport of High-Level Radioactive Waste from Deep Continental Repositories, EPA/520/4-78-044 (June 1978).

[11]The Waste Confidence Rulemaking was initiated by the NRC in 1979 in response to the decision in *Minnesota v. NRC,* 602 F.2d 412 (D.C. Cir. 1979). Its purpose is "to reassess its degree of confidence that radioactive wastes produced by nuclear facilities will be safely disposed of, to determine when any such disposal will be available, and whether such wastes can be safely stored until they are safely disposed of. ..." 44 Fed. Reg. 61372-73 (1979). The NRC recognized the close interdependence and interrelationship

significant uncertainties surround the operation and feasibility of any waste-storage mode.[12] Finally, the NRC has paid no attention to the potential for releases through transportation accidents, theft, sabotage or other human intervention. *See, e.g., NRDC v. NRC, supra,* 685 F.2d at 513-16 (Edwards, J., concurring and dissenting) (Pet. App. 109a-115a). These documented uncertainties and risks recognized by DOE, EPA, USGS and even the NRC well illustrate the propriety of the court of appeals' conclusion that the zero-release assumption is arbitrary and capricious both as a factual finding and a decision-making device.

Petitioners urge the court that any overly optimistic assumptions made by the NRC in developing the zero-release assessment are more than compensated by its conservative assessment of other entries in the Table S-3 rule (Brief of Petitioner Commonwealth Edison Company, et al. at 24). This approach should be rejected by the

---

between this and the Table S-3 rulemaking. 44 Fed. Reg. 61373. The Waste Confidence Rulemaking has not yet concluded, although the proceeding has been closed. It is interesting to observe, however, that while the Table S-3 rule is based on optimistic assumptions relating soley to technological assurances, the Report of the Working Group, dated January 29, 1981, which summarized the various parties' positions and identified the major issues in the Waste Confidence Rulemaking, recognized the existence of significant institutional as well as technical issues associated with development of a permanent repository. The IRG Report, upon which the Table S-3 relies, also concedes the presence of "institutional problems. ..." Interagency Review Group, Report to the President by the Interagency Review Group on Nuclear Wast Management, at 87-88 (March 1979) (not included in excerpts at J.A. 378, *et seq.*) The NRC has neither recognized nor addressed these institutional issues in its Table S-3 rulemaking.

[12]*See, e.g.,* U.S. Nuclear Regulartory Comm'n., Report of the Working Group on the Proposed Rulemaking on the Storage and Disposal of Nuclear Wastes (January 29, 1981); NUREG-0116, at 4-94 (October 1976). *See also, Matter of Public Service Electric & Gas Co., et al.,* 6 NRC 206, 209 (1977). (footnote con't on next page)

court for two reasons. First, the NRC in establishing the rule did not adopt this "bubble concept" of assessing the totality of all potential impacts together, but assessed the risks at each stage of the fuel cycle independently. Secondly, the markedly different analysis between the NRC's more conservative assessment in some areas as compared with its optimistic, unsubstantiated assumptions with respect to repository releases do not compensate for each other, but rather highlight the weaknesses in its assessment.

In developing numerical values for potential gaseous and liquid effluent releases, the NRC adopted a "worst-case" analysis, in which it identified the "upper bound of reasonably forseeable environmental costs. ..." *NRDC v. NRC, supra,* 685 F.2d at 486 (Pet. App. 51a-52a).[13] Indeed, the NRC made the conservative assumption that all "fission-product gases in the spent fuel ... would be released during handling and emplacement of the waste

---

The reference to NUREG-0116, relied upon in the promulgation of Table S-3, is particularly pertinent for, while it cavalierly assumes specific siting problems can be eradicated through design, it recognizes the need for actual on-site studies. One of the few on-site evaluations which has been conducted took place at Lyons, Kansas, during the early 1970s. This study of a bedded salt site, virtually ignored in the NRC development documents, revealed substantial previously undisclosed inadequacies due to earlier, undiscovered mining activities, and resulted in the abandonment of the project. The NRC has downplayed this experience, suggesting that it does not "disprove the feasibility of the bedded-salt repository concept. ..." 44 Fed. Reg. 45368, n. 23. Nevertheless, it does illustrate the types of risks and uncertainties inherent in the site selection process and that not all site inadequacies can be mitigated through engineering design.

[13]Contrary to Commonwealth Edison's assertion at page 25 of its brief, the court of appeals did not require "worst-case" analysis in generic rulemaking. Rather, it accepted the propriety of the NRC's use of this methodology, although other methods of assessing uncertainties would be legitimate (Pet. App. 51a-52a). This method has previously been explicity approved in *North Slope Borough v. Andrus,* 486 F. Supp. 332, 346 (D. D.C. 1980), *aff'd* in

prior to sealing of the repository. ..." 44 Fed. Reg. 45368 (Pet. App. 364a-365a) (footnote omitted). This assumption was based upon the possibility of storage canister and packaging corrosion while the repository is open. *Id.*

In stark contrast to this conservative analysis for releases during the emplacement period, the NRC assumed no release after the repository is sealed. This assumption is not based on the conclusion, as petitioners' analysis suggest, that all potential releases would have already occurred during emplacement and is therefore reflected in the gaseous and liquid effluent release values. Rather, it is based on the conclusion of "complete repository integrity ...," that there is no possibility that the radiation within the repository could escape. *Id.* In light of the aforementioned uncertainties, as well as the recognized risks, this assumption can only be characterized as a "best-case" analysis. The NRC's inconsistency in its analysis, contrary to letter and spirit of NEPA, only serves to further erode the integrity of Table S-3.

III. The Court Of Appeals' Decision Lies Within The Scope Of This Court's Remand.

One of the fundamental issues raised by petitioners is whether the court of appeals' decision lies within the scope of review set forth by this court in *Vermont Yankee II.* Relying upon the dissenting opinion of Judge Wilkey, petitioners urge that in the majority opinion, the court of appeals substituted its judgment for that of the NRC and "has chosen to announce that the civil nuclear industry is not

---

part, *rev'd.* in part, 642 F.2d 589, 605-6 (D.C.Cir. 1980). *See also* 40 C.F.R. sec. 1502-22 (b) (which requires worst-case analysis to address uncertainties under NEPA). The court of appeals appropriately imply, however, that once a methodology has been selected, it must be applied consistently across the board.

environmentally sound until the waste management problem has been solved to test court's satisfaction. ..." (Brief of Petitioners Commonwealth Edison Company, et al. at 40-41). Petitioners' analysis is wholly in error, mischaracterizing both the analysis and conclusions of the court of appeals.

This action first came to this court's attention in *Vermont Yankee II.* In that action, the court was called upon to review a court of appeals decision overturning the original Table S-3 rule. The specific issue before the court, as characterized by the court, was procedural in nature, *i.e.,* the adequacy of the rulemaking proceedings which resulted in promulgation of the rules. *Vermont Yankee II, supra,* 435 U.S. at 535 and 541. In reversing the decision of the court of appeals, this court made it quite clear that its decision rested solely on the procedural issue. *Id.,* 435 U.S. at 525 and 535-36, n. 14. Specifically, it reversed the court of appeals' decision for requiring more by way of procedural safeguards than is required under the APA. *Id.,* 435 U.S. at 548.

The purpose and scope of the court of appeals' review on remand was equally well-defined. The court stated, 435 U.S. at 548-49:

> There remains, of course, the question of whether the challenged rule finds sufficient justification in the administrative proceedings that it should be upheld by the reviewing court. Judge Tamm, concurring in the result reached by the majority of the Court of Appeals, thought that it did not. ... We accordingly remand so that the Court of Appeals may review the rule as the Administrative Procedure Act provides. We have made it abundantly clear before that when there is a contemporaneous explanation of the

> agency decision, the validity of that action must "stand or fall on the propriety of that finding, judged, of course, by the appropriate standard of review. ..." (Citations omitted.)[14]

The decision of the court of appeals falls squarely within the scope of review established in the APA. Indeed, the court of appeals went to great lengths to document the standards under which Table S-3 was being reviewed.[15] Moreover, the decision of the court of appeals is expressly based on the APA: "We conclude that the Table S-3 Rules are arbitrary and in violation of NEPA because they fail to allow for consideration of uncertainties underlying the assumption that no radiological effluents will be released into the biosphere once wastes are sealed in a permanent repository. ..." 685 F.2d at 477 (Pet. App. 34a).

Petitioners' mischaracterization of the standards applied by the court of appeals stems, in large part, from a misunderstanding of its substantive decision.

---

[14]The court further elucidated the scope of review on remand as defined by the standards within the APA, 435 U.S. at 536, n. 14:

> Upon remand, the majority of the panel of the Court of Appeals is entirely free to agree or disagree with Judge Tamm's conclusion that the rule pertaining the the back end of the fuel cycle under which petitioner Vermont Yankee's license was considered is arbitrary and capricious within the meaning of § 10(e) of the Administrative Procedure Act. 5 U.S.C. §706 (1976 ed.), even though it may not hold, as it did in its previous opinion, that the rule is invalid because of the inadequacy of the agency procedures. ...

[15]*See, e.g.*, 685 F.2d at 459, n. 75 (Pet. App. 28a), wherein the court states:

> We are here reviewing the original, interim and final Rules on their faces — not the procedures that produced them. We also do not consider whether nuclear power

The petitioners paraphrase the court as ruling that "uncertainties, at least in the context of NEPA, are independent environmental costs which can never be excluded from debate in an environmental reactor licensing system regardless of their previous consideration in a rulemaking." (Brief of Petitioners Commonwealth Edison Company, et al., at 14 and 17).

In reality, the court of appeals made no such ruling. Indeed, the court took no position on whether these waste disposal issues were appropriate for generic consideration.[16] Additionally, the court expressly accepted the Commission's authority to engage in generic rulemaking.[17] What the court did hold is that uncertainties or risks are factors which must be considered under NEPA and that, if such risks are to be considered by way of a generic rule, the risks must be reflected in the rule. *NRDC v. NRC, supra,* 685 F. 2d at 479-80 and 482-83 (Pet. App. 38a and 43a-44a). It then went on to hold that the NRC had arbitrarily and capriciously failed to account for the uncertainties in fuel cycle activities in the generic rule. The court stated, 685 F.2d at 483 (Pet. App. 46a):

> plants are "good" or "bad." Congress has left it up to the Commission to determine whether, in individual instances, the benefits of nuclear power outweigh the costs. *All we consider is whether the Commission has complied with the mandates of the APA and NEPA in performing this task.* (Emphasis added.)

[16] *See* 685 F.2d at 482, n. 121 (Pet. App. 44a), wherein the court states: "We express no view as to whether this type of generic balancing could be done in the context of this case."

[17] *See* 685 F.2d at 482 (Pet. App. 43a), wherein the court states:

> In general, an agency in the position of the Commission is free to implement NEPA through generic rulemaking. If certain types of environmental costs are

Although the Commission did consider these uncertainties, it did not do so in a manner that would allow licensing decisions to be affected — either directly or indirectly — by the risk that nuclear waste will not be successfully isolated from the environment indefinitely. After recognizing that there are uncertainties concerning the permanent storage of nuclear wastes, the Commission simply ruled that licensing decisions should be made on the basis of cost-benefit analyses that omitted the costs represented by those uncertainties. It did not rule that the costs were insignificant, nor did it rule that they were outweighed by generic benefits that would also be excluded from licensing boards' considerations. In effect, therefore, the Commission directly contravened NEPA's requirement that environmental costs be considered "at every stage where an overall balancing of environmental and nonenvironmental factors is appropriate." The risks entailed by the possible failure to develop a successful waste-disposal system were never part of any "balancing." They were considered alone, in a vacuum, and then excluded from the licensing boards' balancing. The process that began with the proposal of the Table S-3 Rule does not allow the uncertainties concerning permanent storage to play a role in the ultimate licensing decision. That omission, and hence,

---

common to a class of actions, NEPA does not require that an agency engage in duplicative and possibly inconsistent individual determinations, but allows it, in the alternative, to conduct a single rulemaking to determine generic values to be considered together with case-specific costs and benefits in individual proceedings. (footnote omitted).

> the Rule, which causes it, constitutes a blatant violation of NEPA. (Footnotes omitted.)

As previously demonstrated, there are a multitude of costs and risks associated with the back end of the uranium fuel cycle which are yet to be quantified. The NRC concedes that these costs and risks are substantial. Yet, by incorporating a zero-release assumption into Table S-3, the NRC has removed these costs and risks from the cost-benefit analyses which NEPA requires. The court of appeals correctly determined that these unsubstantiated assumptions cannot and do not satisfy the requirements of NEPA, and that the unwarranted exclusion of these factors is, indeed, arbitrary and capricious.

CONCLUSION

For the reasons stated herein, the *amici* States herein respectfully urge the court to affirm the decision of the court of appeals.

Respectfully submitted,

BRONSON C. LA FOLLETTE*
Attorney General

CARL A. SINDERBRAND
Assistant Attorney General

STATE OF WISCONSIN
Post Office Box 7857
Madison, Wisconsin 53707
(608) 266-3936

ROBERT T. STEPHAN
Attorney General
ROBERT VINSON EYE
Assistant Attorney General
STATE OF KANSAS
2nd floor, Kansas Judicial Center
Topeka, Kansas 66612
(913) 296-2215

WILLIAM J. GUSTE, JR.
Attorney General
STATE OF LOUISIANA
Post Office Box 44005
Baton Rouge, Louisiana 70804
(504) 342-7013

JOSEPH I. LIEBERMAN
Attorney General
STATE OF CONNECTICUT
30 Trinity Street
Hartford, Connecticut 06106
(203) 566-2027

*Counsel of Record

JOHN J. EASTON, JR.
Attorney General
MERIDETH WRIGHT
Assistant Attorney General
STATE OF VERMONT
Office of Attorney General
109 State Street
Montpelier, Vermont 05602
(802) 828-3171

JOHN ASHCROFT
Attorney General
ROBERT LINDHOLM
Assistant Attorney General
STATE OF MISSOURI
Post Office Box 899
Jefferson City, Missouri 65102
(314) 751-3321

WILLIAM M. LEECH, JR.
Attorney General
STATE OF TENNESSEE
450 James Robertson Parkway
Nashville, Tennessee 37219
(615)741-3491

MARK V. MEIERHENRY
Attorney General
STATE OF SOUTH DAKOTA
Attorney General's Office
Capitol Building
Pierre, South Dakota 57501
(605) 773-3215

PAUL G. BARDACKE
Attorney General
STATE OF NEW MEXICO
Post Office Drawer 1508
Santa Fe, NewMexico 87504-1508
(505) 827-6000

TANY S. HONG
Attorney General
STATE OF HAWAII
State Capitol
Honolulu, Hawaii 96813
(808) 548-4740

CHAUNCEY H. BROWNING, JR.
Attorney General
LEONARD KNEE
Deputy Attorney General
STATE OF WEST VIRGINIA
Environmental Task Force
Building 3, Room 630
Capitol Complex
Charleston, West Virginia 25305
(304) 348-9160

A.G. McCLINTOCK
Attorney General
STATE OF WYOMING
123 Capitol Building
Cheyenne, Wyoming 82002
(307) 777-7841

JIM MATTOX
Attorney General of Texas
DAVID RICHARDS
Executive Assistant Attorney General
STATE OF TEXAS
P.O. Box 12548
Capitol Station
Austin, Texas 78711
(512) 475-6139

JANICE E. KERR
J. CALVIN SIMPSON
GRETCHEN DUMAS
Attorneys for
PEOPLE OF THE STATE OF CALIFORNIA
and PUBLIC UTILITIES COMMISSION OF
THE STATE OF CALIFORNIA
350 McAllister Avenue
San Francisco, California 94102
(415) 557-0470